

Notice of Allowability

Application No.

09/886,637

Examiner

Bryan J. Fox

Applicant(s)

KULLMAN ET AL.

Art Unit

2686

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address--

All claims being allowable, PROSECUTION ON THE MERITS IS (OR REMAINS) CLOSED in this application. If not included herewith (or previously mailed), a Notice of Allowance (PTOL-85) or other appropriate communication will be mailed in due course. **THIS NOTICE OF ALLOWABILITY IS NOT A GRANT OF PATENT RIGHTS.** This application is subject to withdrawal from issue at the initiative of the Office or upon petition by the applicant. See 37 CFR 1.313 and MPEP 1308.

1. ☒ This communication is responsive to the Amendment filed 11/25/05.
2. ☒ The allowed claim(s) is/are 1-5, 9-15, 18-22, 24-34, 36, 39-42.
3. ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some* c) ☐ None of the:
- ☐ Certified copies of the priority documents have been received.
 - ☐ Certified copies of the priority documents have been received in Application No. _____.
 - ☐ Copies of the certified copies of the priority documents have been received in this national stage application from the International Bureau (PCT Rule 17.2(a)).

* Certified copies not received: _____.

Applicant has THREE MONTHS FROM THE "MAILING DATE" of this communication to file a reply complying with the requirements noted below. Failure to timely comply will result in ABANDONMENT of this application.
THIS THREE-MONTH PERIOD IS NOT EXTENDABLE.

4. ☐ A SUBSTITUTE OATH OR DECLARATION must be submitted. Note the attached EXAMINER'S AMENDMENT or NOTICE OF INFORMAL PATENT APPLICATION (PTO-152) which gives reason(s) why the oath or declaration is deficient.
5. ☐ CORRECTED DRAWINGS (as "replacement sheets") must be submitted.
- (a) ☐ including changes required by the Notice of Draftsperson's Patent Drawing Review (PTO-948) attached
- 1) ☐ hereto or 2) ☐ to Paper No./Mail Date _____.
- (b) ☐ including changes required by the attached Examiner's Amendment / Comment or in the Office action of Paper No./Mail Date _____.
- Identifying indicia such as the application number (see 37 CFR 1.84(c)) should be written on the drawings in the front (not the back) of each sheet. Replacement sheet(s) should be labeled as such in the header according to 37 CFR 1.121(d).
6. ☐ DEPOSIT OF and/or INFORMATION about the deposit of BIOLOGICAL MATERIAL must be submitted. Note the attached Examiner's comment regarding REQUIREMENT FOR THE DEPOSIT OF BIOLOGICAL MATERIAL.

Attachment(s)

- | | |
|---|--|
| 1. <input type="checkbox"/> Notice of References Cited (PTO-892) | 5. <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 2. <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 6. <input type="checkbox"/> Interview Summary (PTO-413),
Paper No./Mail Date _____. |
| 3. <input type="checkbox"/> Information Disclosure Statements (PTO-1449 or PTO/SB/08),
Paper No./Mail Date _____ | 7. <input type="checkbox"/> Examiner's Amendment/Comment |
| 4. <input type="checkbox"/> Examiner's Comment Regarding Requirement for Deposit
of Biological Material | 8. <input checked="" type="checkbox"/> Examiner's Statement of Reasons for Allowance |
| | 9. <input type="checkbox"/> Other _____. |

Bryan Fox

DETAILED ACTION

Allowable Subject Matter

Claims 1-5, 9-15, 18-22, 24-34, 36 and 39-42 are allowed.

The following is an examiner's statement of reasons for allowance:

Stead discloses a system that provides location information concerning wireless telephones in a form that is commercially useful (see page 2, paragraph 12). The system finds the sector that transmitted the signal and outputs a polygon associated with each sector in the wireless network, the polygon representing where the mobile device is likely to be located (see page 4, paragraphs 43 and 44). The wireless network 20 provides location data both to commercial entities via a global interconnected network of networks 40 and to a Public Safety Access Point 30 (see page 2, paragraph 24 and figure 1). Information such as the nearest ATM may be satisfactorily answered by providing this location data to the relevant service provider 50 or merchant 60 who may then respond with an answer to the geographic proximity question with point-of-interest information (see page 2, paragraph 25). A polygon is associated with each sector in the wireless network (see page 4, paragraph 44).

Ghosh et al disclose a system for determining location of a mobile unit where the known base locations are used to define lines L12, L23 and L13 to aid in positioning the mobile station (see column 5, lines 22-39 and figure 4).

The prior art fails to teach or suggest establishing a PI-based location to represent the given sector comprises geometrically establishing a polygon of influence for the origin of the given sector with respect to the origins of adjacent sectors, and

Art Unit: 2686

wherein geometrically establishing the polygon of influence for the origin of the given sector with respect to the origins of adjacent sectors comprises (i) making a list of connecting lines that connect the origin of the given sector to origins of adjacent sectors, (ii) making a list of potential edge lines including perpendicular bisectors of each connecting line, (iii) clipping the potential edge lines where they intersect each other, and retaining as edge lines a piece of each clipped potential edge line closest to the origin of the given sector, and (iv) connecting the edge lines so as to form the polygon of influence, as recited in claims 1, 11, 19 and 36.

The prior art fails to teach or suggest establishing a PI-based location to represent the given sector, wherein establishing the PI-based location to represent the given sector comprises (i) geometrically establishing a polygon of influence for the origin of the given sector with respect to the origins of adjacent sectors and (ii) establishing as the PI-based location a representative point within the polygon of influence, wherein establishing as the PI-based location a representative point within the polygon of influence comprises selecting a center point of a minimum bounding rectangle around the polygon of influence as recited in claims 10 and 20.

Any comments considered necessary by applicant must be submitted no later than the payment of the issue fee and, to avoid processing delays, should preferably accompany the issue fee. Such submissions should be clearly labeled "Comments on Statement of Reasons for Allowance."

Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Bryan J. Fox whose telephone number is (571) 272-7908. The examiner can normally be reached on Monday through Friday 9-5.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Marsha Banks-Harold can be reached on (571) 272-7905. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

Bryan Fox
February 6, 2006


CHARLES APPIAH
PRIMARY EXAMINER